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STATE OF GEORGIA

SPECIAL STUDY OF FACTORS RELATED TO
FUTURE FARM CONSUMPTION OF ELECTRICITY



Prepared By
Power Requirements Section
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RURAL ELECTRIFICATION ADMINISTRATION

Field Study
Completed In
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May 26, 1955

Power Requirements Section
Electric Operations and Loans Division

SUMMARY AND CONCLUSION
STATE OF GEORGIA

Economic levels for farmers in the State of Georgia are , on the average, below those in its Region and those for the country as a whole. The Farm Operator Level of Living Index for Georgia in 1950 was 80 compared with an average index of 87 for the Region comprising Georgia, Florida, and South Carolina. The index was 122 for the Nation. Farms in the State have shown more rapid improvement in "levels of living" from 1940 to 1950 and average farm usage of electricity has grown more rapidly compared with the Region and Nation. Crop farming predominates in Georgia with cotton and peanuts being the dominant crops. Livestock and forest products are relatively important in some areas. There are large numbers of general farms and still more part-time and residential farms.

Summary data for different areas within the State and projections of average farm usage of electricity by area are presented in the following table.

SELECTED ECONOMIC CHARACTERISTICS
AND TRENDS IN AVERAGE KWH USAGE,
REA FARM CONSUMERS, GEORGIA

Characteristics and Trends	State	Sample Areas ^{a/}					
		Total	A	B	C	D	E
Average Farm Income 1949	\$1893	\$1893	\$861	\$1391	\$1864	\$2318	\$3113
Level of Living Index 1950	80	80	69	82	77	76	77
Consumers Using Gas - %	---	13	9	7	9	28	11
Average Monthly KWH 1954	212	201	147	228	156	214	200
<u>Indicated Percent Increase</u>							
<u>In Average KWH Use</u>							
Consumers Plan in 3 Years ^{b/}							
First-served Trend-In 11 Years ^{c/}	---	25	29	30	30	20	18
All Farm Trend-In 11 Years ^{d/}	---	100	---	102	99	95	109
		92	95	97	79	84	87

May 26, 1955

Power Requirements Section
Electric Operations and Loans Division

SPECIAL STUDY OF FACTORS RELATED TO
FUTURE FARM CONSUMPTION OF ELECTRICITY
STATE OF GEORGIA

This study of basic factors related to the future consumption of electricity by farm consumers of REA borrowers in the State of Georgia is based on a field study conducted by Vergil Bufford, Agricultural Economist, during July and August, 1954. The field work consisted primarily of interviews with 321 served farm consumers of five REA borrowers.^{1/} Electricity consumption data were also secured for these and other farm consumers. Supporting economic data were obtained from U. S. Census reports and other secondary sources.

Consumers classified as farm account for approximately 85 percent of total REA consumers in Georgia and 80 percent of total kwh sales. This study was performed to provide current field data relative to the economic condition and buying plans of these farm consumers. The field information, along with kwh usage trends from operating reports and economic data from census reports, was assembled for the purpose of increasing the reliability of kwh estimates for borrowers in the State of Georgia and in surrounding areas. The State of Georgia was selected for special study because it is centrally located in a section of the country for which little recent appliance saturation and similar data were available and for which a number of kwh estimates were to be required.

TYPE OF FARMING AREAS AND SAMPLE SYSTEMS

Selected for the survey were five borrowers representing different types of areas within the State. These borrowers listed in order corresponding with their locations from north to south, are:

Amicalola Electric Membership Corporation, Jasper (Georgia 96 Pickens)
Walton Electric Membership Corporation, Monroe (Georgia 35 Walton)
Washington County Electric Membership Corporation, Sandersville, (Ga. 69 Washington)
Satilla Rural Electric Membership Corporation, Alma (Georgia 67 Bacon)
Mitchell County Electric Membership Corporation, Camilla (Georgia 70 Mitchell)

^{1/} Respondents in the survey were randomly selected from lists of served farm consumers at each of the five participating borrowers to comprise a one percent sample for each system.

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- a/ See page 2 of report for sample systems.
- b/ Based on respondents' plans to add equipment (See Table VII).
- c/ Based on average increase of usage by sample groups of first connected consumers, 1945-1953 extended to 1964 (See Table IX).
- d/ Based on average increase from operating reports of sample systems, 1945-1954 extended to 1965.

Trends in numbers of farms within the State would indicate little increase, if any, in farm consumers of REA systems within the next decade. Rural non-farm consumers will probably increase and some of these may be classified as farms in operating reports.

Total power requirements by REA farm consumers should be somewhat more than double present levels within the next 10 years, based on the data presented in this report.

E. R. Brown, Head
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State of Georgia

Type of Farming Areas

Major type of farming areas within Georgia have been classified for purposes of this study as follows:

<u>Area</u>	<u>Major Type of Farming</u>	<u>Corresponding Sample System</u>
A	General: livestock - small scale	Georgia 96 Pickens
B <u>1/</u>	Specialized Cotton - Southern Piedmont	Georgia 35 Walton <u>2/</u>
C	Specialized Cotton - Upper Coastal Plains	Georgia 69 Washington
D	General: crop and forest products	Georgia 67 Bacon
E	Peanuts and General	Georgia 70 Mitchell

The areas served by the sample systems compared to the major type of farming areas in the State are shown in the accompanying map.

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- 1/ For an earlier study of this area, see Georgia Experiment Station and USBAE, Electricity on Farms in the Upper Piedmont of Georgia, Bulletin 263, June 1950, Experiment, Georgia.
- 2/ To economize on size of sample, Georgia 35 Walton was used to represent proportionally greater area and consumers than was the case for the other systems selected. Data for Georgia 35 are weighted double in State totals of data based on the sample.

State of Georgia

Area A ^{1/} is within a generalized type of farming area described by the U. S. Department of Agriculture ^{2/} as general farming: livestock, fruit and tobacco - small scale. According to the 1950 Census of Agriculture this area within the State of Georgia received approximately 80 percent of its farm income from livestock and livestock products. Poultry and livestock other than dairy were the important types of farms.

Within Area B are two major subareas. Area B1 ^{3/} is within a cotton and general farming area. The larger part, B2, ^{4/} is classified as specialized cotton - Southern Piedmont. Crops accounted for 57 percent of farm sales in the former and 43 percent in the latter during 1949. In both, about one-third of the farms are specialized cotton farms.

Most of Area C ^{5/} is specialized cotton farming in the Upper Coastal Plains. Along the northern boundary of Area C runs a strip of territory (not shown separately on map) known as the Sand Hills and which has both cotton and general farming. Crop sales account for about two-thirds of farm income in Area C with approximately 40 percent of the farms classified as specialized cotton.

Area D includes two distinct types of farming areas which were combined for the purposes of this study. Farming in the part designated as D1 ^{6/} includes cotton, tobacco, hogs and peanuts and is in the Lower Coastal Plains. Crops account for around 70 percent of farm sales with about one-third of the farms specializing in field crops other than cotton. Part D2 ^{7/} is in the Coast Flatwoods area and is primarily general farming: forest products, truck and cotton - small scale with some specialized tobacco farming. Here crops account for approximately one-half of farm income, livestock and livestock products 30 percent and forest products 20 percent. Approximately one-third of the farms specialize in tobacco production.

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- ^{1/} Agriculture census Area 2.
 - ^{2/} U. S. Bureau of Agricultural Economics, Generalized Types of Farming in the United States, Agricultural Information Bulletin No. 3, February 1950.
 - ^{3/} Census Area 1 and A
 - ^{4/} Census Areas 3 and B, 4a and 4b.
 - ^{5/} Census Areas 5, C, D, and 6.
 - ^{6/} Census Area 8
 - ^{7/} Census Areas 9 and E.

State of Georgia

Characteristics of the Sample

The distribution according to type of farming areas, of REA farm consumers in Georgia in 1954, the total number of farms in the State in 1950 and the weighted number of sample consumers are compared below:

	Total Number	Percent Distribution of Farm Consumers, Total Farms and Sample Consumers, By Type of Farming Area					
		<u>Total</u>	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>
REA Farm Consumers	203,937	100	7	43	15	20	15
Total Farms	198,037	100	5	45	13	19	18
Weighted Sample	391	100	11	36	12	24	17

These distributions correspond reasonably well and, on this basis, totals of both census and sample data should be fairly representative of all REA farm consumers in the State. That the number of REA farm consumers exceed the total number of farms according to the census is probably accounted for in part by differences in classification and the existence of multiple services per farm.

TABLE I

CHARACTERISTICS OF SAMPLE SYSTEMS

System Characteristics	(A) Ga. 96	(B) 35	(C) 69	(D) 67	(E) 70
Year Energized	1941	1937	1938	1938	1938
Weighted Age of Lines, June '54 (Years)	8	10	8	8	9
Average Years Respondents Served	7	10	6	8	8
Retail Rates					
Minimum (dollars/kwh)	1.00/12	1.00/20	1.00/11	1.75/27	1.00/11
Cooking Block (¢ per kwh)	2.5	2.0	2.0	2.0	2.0
Water Heating Block (¢ per kwh)	1.2	1.0	1.2	1.0	1.2
Average Farm Kwh Per Month - 1954	147	228	156	214	200

No attempt has been made to summarize system characteristics as shown above for all the more than 40 borrowers in the State or by areas. However, the extent to which these and other pertinent characteristics of the sample systems are representative of all systems in Georgia is reflected in the following comparison of kwh usage data for the sample systems and all REA systems in the State. The following table also indicates the representativeness of the individual samples for the particular systems.

TABLE II
COMPARISON OF SAMPLE AND SYSTEM DATA

Data Compared	State ^{a/}	Sample ^{b/} Total	(A) Ga. 96	(B) 35	(C) 69	(D) 67	(E) 70
<u>Av. No. Farm Consumers</u>							
Operating Reports, 1954	203,937	32,360	4,383	6,853	5,058	9,565	6,501
In Sample	---	321	43	70	47	96	65
<u>Av. Monthly Farm Kwh</u>							
Operating Reports, 1954	212	201	147	228	156	214	200
Operating Reports, time of appraisal	202 ^{c/}	192	134 ^{d/}	220 ^{d/}	151 ^{e/}	203 ^{e/}	188 ^{e/}
Sample Consumers Record	---	185	152 ^{d/}	189 ^{d/}	134 ^{e/}	193 ^{e/}	225 ^{e/}
Sample Consumers Indicated ^{f/}	---	185	182	186	129	203	196

^{a/} Preliminary State data for 1954.

^{b/} Data for Georgia 35 are weighted double in computing average kwh for sample total.

^{c/} Estimated

^{d/} 12 months ending June 1954

^{e/} 12 months ending July 1954

^{f/} Based on appliances presently owned by respondents and standard kwh usage values for appliances.

The total sample appears to be reasonably representative of the State in terms of average kwh use. The 185 kwh monthly average use of sample consumers is within 10 percent of the estimated 202 kwh average for all REA farm consumers in the State during the same period. The actual operating report average for sample systems was 5 percent below the state average, a difference anticipated. Another part of the difference results from the average of sample consumers being 4 percent below the average of all farm consumers of the sample systems. Indicated usage based on appliance ownership and standard kwh use values for appliances was the same as the actual billing record average for all sample consumers.

As might be expected, greater differences occurred between sample averages and total farm averages for some of the individual systems. The greatest difference between recorded average of a sample group and total farm average was the 20 percent by which the sample average exceeded the operating report average in the case of Georgia 70. In Area A was found the widest difference between estimated national average use of appliances and actual usage. Here the indicated average based on standard kwh usage for appliances exceeded the actual average of respondents by 20 percent. In theory and in fact the sample data is more representative of state totals than of the individual systems and areas within the State.

ECONOMIC CHARACTERISTICS AND TRENDSEconomic Characteristics As of the 1950 Census

Of the total population of Georgia in 1950, 57 percent was classified by census definitions as rural. Of the rural component, about one-half were living on farms. REA borrowers reported their farm consumers in 1953 were approximately 90 percent of the total number classified as farm and residential. To the extent borrowers' classifications correspond with census definitions, the economic conditions and prospects related to farming in Georgia are of paramount importance to REA systems in the State. Overall data for the State or for its nonfarm portion could be misleading if interpreted as applying directly to the situation of REA borrowers.

Part-time and residential farms comprise a large portion of total farms in Georgia, almost 40 percent in 1950. The approximate proportions these were of total farms in each of the areas were: three-fourths in Area A, one-half in Area B, one-third in C, one-fourth in D and one-sixth in E.

Farm Operator Family Level of Living Indexes for 1950 indicate that the State with an index of 80 ranks slightly below the average of 87 for the Region (comprising Georgia, Florida and South Carolina) and still further below the national index of 122. In 1940 the index was 37 for Georgia, 43 for the Region and 79 for the Nation. This index is based on income and percentage of farms with electricity, telephones and automobiles. The index by areas, along with two of its components, is shown in Table III.

TABLE III

SELECTED ECONOMIC CHARACTERISTICS OF
TYPE OF FARMING AREAS AND STATE, 1950

Characteristics	State	Type of Farming Area				
		A	B	C	D	E
Farm Level of Living Index ^{a/}	80	69	82	77	76	77
Percent Farms with Central Station Electricity	75	77	80	69	75	69
Average Income From Farm Sales (1949)	\$1893	\$861	\$1391	\$1864	\$2318	\$3113
Average Size of Farms - Acres	130	84	106	165	148	161

^{a/} Unweighted average of Farm Operator Family Level-of-Living Indexes for non-metropolitan economic areas in respective type of farming areas.

State of Georgia

Area A had the lowest level of living index and Area B the highest. There was little difference between the other three areas. Percent of farms with central station electricity in 1950 ranged from 69 percent in Areas C and E to 80 percent in Area B. As of June 1954, it is estimated that 93 percent of the farms in Georgia had electric service compared with 75 percent in 1950. Average gross farm sales in 1949 ranked in alphabetical order from lowest in Area A to highest in Area E. Average value of farms in Georgia in 1950 was \$5,323 with an orderly progression by area from \$3,293 in Area A to \$6,279 in Area E. The ranking of areas with respect to farm incomes and value was generally related to size of farms and inversely, to the proportion that part-time and residential farms were of total farms.

The average size of farms in the sample system areas, as indicated by the sample, was 110 acres compared with the State average of 130 in 1950. The widest differences between the sample and census data were in the case of Area A where size of respondents' farms were above that for the areas as a whole and in Areas C and D which had larger farms than indicated by sample consumers.

Thirty percent of the farm operators in Georgia in 1950 owned their farms, completely or in part. The proportions were about one-fourth for Areas A, B and C, over one-third in Area E and over 40 percent in Area D. Off-farm employment for 100 days or more in 1949 was reported by slightly more than one-fifth the farm operators in the State. By area, the amount of off-farm employment varied inversely with the size of farming operations and tended to compensate for lower incomes from farm sales. In Area A, one-third of the farm operators worked off the farm 100 days or more compared with 12 percent in Area E. This pattern by area is also revealed by the sample data, except that greater off-farm employment was indicated in 1954 with almost one-third of the sample reporting 100 days or more. In Area A the proportion of respondents reporting this much off-farm employment was about 45 percent and in Area E it was 25 percent.

Economic Trends to 1950

Selected economic trends to 1950 are presented in Tables IV and VI.

TABLE IV
ECONOMIC TRENDS, STATE, REGION AND U. S.

Item		Trend			
		1930	1940	% Change 1930-40	% Change 1940-50
<u>Population</u>					
Georgia	a/	2,908,506	3,123,723	+ 7.4	+ 10.3
Southeast - 2		6,115,482	6,920,941	+ 13.2	+ 20.4
U. S.		122,775,046	131,669,275	+ 7.2	+ 14.5
				% Change 1930-40	% Change 1940-50
<u>No. of Farms</u>		1930	1940		
Georgia		255,598	216,033	- 15.5	- 8.3
Southeast - 2		472,495	415,839	- 12.0	- 5.1
U. S.		6,288,685	6,096,797	- 3.1	- 11.7
<u>Farm Dwelling Units</u>			1940		% Change 1940-50
Georgia			292,828		- 27.6
Southeast - 2			551,256		- 25.6
U. S.			7,106,559		- 19.5
<u>Average Income from</u>				% Change	% Change
<u>All Farm Products Sold</u>		1929	1939	1929-39	1939-49
Georgia		\$ 772	\$ 566	- 26.7	-234.5
Southeast - 2		840	698	- 16.9	-236.8
U. S.		1528	1096	- 28.3	-273.8

a/ REA Southeast Area, Section 2, comprising States of Georgia, Florida and South Carolina.

TABLE V

POWER COSTS AND FARM CONSUMER TRENDS, STATE, REGION AND U. S.

Item		Trend			
<u>Cost of Purchased Power^a</u>					% Change
<u>(REA) (¢/kwh)</u>	<u>1943</u>	<u>1948</u>	<u>1953</u>		<u>1948-53</u>
Georgia	0.90¢	0.67¢	0.64¢		- 4.5
Southeast - 2 ^{a/}	0.96	0.75	0.69		- 8.0
U. S.	0.83	0.89	0.78		- 12.4
<u>Average Number Farm Consumers (REA)</u>					% Change
	<u>1944</u>	<u>1949</u>	<u>1951</u>	<u>1954</u>	<u>1949-54</u>
Sample Systems ^{b/}	11,819	31,165	36,888	39,213 ^{c/}	+ 25.8 ^{c/}
Georgia	----	153,386	183,565	203,937 ^{d/}	+ 33.0
Southeast - 2	----	248,740	301,649	338,645 ^{d/}	+ 36.1
U. S.	----	2,116,352	2,743,315	3,065,732 ^{d/}	+ 44.9
<u>Average Monthly KWH Use Per Farm Consumer(REA)</u>					% Change
	<u>1944</u>	<u>1949</u>	<u>1951</u>	<u>1954</u>	<u>1949-54</u>
Sample Systems ^{b/}	49	97	129	201 ^{d/}	+107.2
Georgia	----	104	139	212 ^{d/}	+103.8
Southeast - 2	----	99	131	196 ^{d/}	+ 98.0
U. S.	----	134	165	226 ^{d/}	+ 68.7

^{a/} REA Southeast Area, Section 2, comprising States of Georgia, Florida and South Carolina

^{b/} Data for Georgia 35 weighted double in totals.

^{c/} Reflects reclassification of around 1,700 consumers from farm classification by Georgia 67.

^{d/} Preliminary

State of Georgia

The number of farms in the State and Region have declined over the past 10 (1940-50) and 20 years (1930-50) while total population has increased. This corresponds to trends for the Nation as is shown in Table IV. The decline in farm numbers in Georgia and the Nation continued between 1945 and 1950. Total rural population has shown a modest increase accounted for by increases in its rural nonfarm component. In Georgia between 1940 and 1950, rural nonfarm population increased 60 percent and dwelling units for the group increased 40 percent. These rates were similar to those for the Region, but exceeded national rates of increase. Farm dwelling units in Georgia declined, 1940-50, at a greater rate than number of farms and relatively more than in the Nation. As between the service areas of the Georgia sample systems in the period 1940-50, the number of farms decreased greatest for Georgia 70 (Area E) while there was an increase for Georgia 67 (Area D) of 12 percent (Table VI).

Average income from farm sales increased in Georgia between 1939 and 1949, but at a smaller rate than for the country as a whole. In relative growth of farm income, levels of living and total population Georgia has led its neighboring State of South Carolina, but has been behind the State of Florida. Within Georgia, the area of Georgia 96 (Area A) showed the greatest percentage gain in average farm sales between 1939 and 1949 compared with the other sample areas. This comparison is shown in Table VI.

Income data for farm families and unrelated individuals,^{1/} reflecting net cash income from all sources, are available by States for 1949. For Georgia farm units the median income was \$381 compared with \$390 in South Carolina, \$622 in Florida and \$1,567 for all farm units in the Nation.

Consumer and Electric Usage Trends

Wholesale power costs to REA borrowers declined less in Georgia over the past 5 years than in the Region or Nation. However, over the past 10 year period, costs fell at the same rate as for the Region and fell considerably more than for the Nation (Table V). As between the different areas within the State, levels and rates of change for wholesale power costs have been fairly uniform (Table VII).

^{1/} The phrase "unrelated individuals" as used here, refers to individuals (other than inmates of institutions) not living with relatives.

State of Georgia

The number of farm consumers served by REA borrowers in Georgia have continued to increase, although at slightly lower rates than for the Region and the Nation. In view of trends in total numbers of farms and farm dwellings this continued growth in consumers probably reflects service to previously unserved farms and service to consumers which would be classed as rural nonfarm by census definitions. Among the sample systems, increases in farm consumers, 1949-1954, ranged from 17 to 40 percent.

Average monthly kwh consumption of REA farm consumers in Georgia more than doubled over the most recent 5 year period. This rate of increase was slightly more than for the Region and compares with an increase of 69 percent for all REA borrowers. Rates of increase over this period by sample systems varied from approximately 70 percent for Georgia 69 (Area C), which had the greatest increase in number of consumers, to over the 150 percent for Georgia 67 (Area D).

Over the most recent 10 year period (1944-1954), weighted average farm use of the sample systems increased 314 percent and from 1943 to 1953, 310 percent. For all farms east of the 100th meridian, average monthly use of electricity was 123 kwh in 1943 and 250 kwh in 1953, or an increase of 103 percent over a 10 year period. In terms of absolute amounts of kwh per month, increases over the decade 1943-1953 were 135 kwh for farm consumers of the sample systems and 127 kwh for all eastern farms. Data relating to trends of farm consumer numbers and kwh use are shown in Table V for the State and Region and in Table VII for areas within the State.

TABLE VI
ECONOMIC TRENDS, SAMPLE SYSTEMS ^{a/}

<u>Item</u>		<u>Trend</u>			
<u>Number of Farms</u>		<u>1940</u>	<u>1945</u>	<u>1950</u>	<u>% Change 1940-50</u>
(A)	Ga. 96	3,620	3,588	3,605	- 0.4
(B)	Ga. 35	7,852	8,661	7,782	- 0.9
(C)	Ga. 69	7,006	7,406	5,872	- 16.2
(D)	Ga. 67	9,517	10,189	10,609	-/ 11.5
(E)	Ga. 70	7,285	8,128	5,974	- 18.0
Total Sample Systems ^{b/}		<u>43,132</u>	<u>46,633</u>	<u>41,624</u>	<u>- 3.5</u>
<u>Average Income from All Farm Products Sold</u>		<u>1939</u>	<u>1944</u>	<u>1949</u>	<u>% Change 1939-49</u>
(A)	Ga. 96	\$ 196	\$ 1,057	\$ 1,485	-/657.7
(B)	Ga. 35	562	1,039	1,487	-/164.6
(C)	Ga. 69	505	1,063	1,558	-/208.5
(D)	Ga. 67	708	1,398	2,125	-/200.1
(E)	Ga. 70	635	1,833	3,219	-/406.9
Average Sample Systems ^{b/}		<u>\$ 566</u>	<u>\$ 1,261</u>	<u>\$ 1,913</u>	<u>-/237.8</u>

^{a/} Data are from census reports for counties served.

^{b/} Data for service area of Georgia 35 are weighted double.

TABLE VII

POWER COST AND FARM CONSUMER TRENDS, SAMPLE SYSTEMS

Item		Trend				
<u>Cost of Purchased Power (¢/kwh)</u>		<u>1943</u>	<u>1948</u>	<u>1953</u>	<u>% Change 1948-53</u>	
(A)	Ga. 96	0.89¢	0.69¢	0.66¢	— 4.4	
(B)	Ga. 35	0.92	0.66	0.66	0.0	
(C)	Ga. 69	0.93	0.70	0.70	0.0	
(D)	Ga. 67	0.95	0.67	0.69	+ 3.0	
(E)	Ga. 70	0.93	0.68	0.66	— 3.0	
Average Sample Systems		<u>0.93¢</u>	<u>0.67¢</u>	<u>0.67¢</u>	<u>0.0</u>	
<u>Average Number Farm Consumers</u>		<u>1944</u>	<u>1949</u>	<u>1951</u>	<u>1954</u>	<u>% Change 1949-54</u>
(A)	Ga. 96	1,061	3,195	4,131	4,383	+ 37.2
(B)	Ga. 35	2,338	5,882	6,300	6,853	+ 16.5
(C)	Ga. 69	1,151	3,627	4,502	5,058	+ 39.5
(D)	Ga. 67	2,823	7,471	9,884	9,565	+ 28.0
(E)	Ga. 70	2,108	5,109	5,771	6,501	+ 27.2
Total Sample Systems ^{a/}		<u>11,819</u>	<u>31,166</u>	<u>36,888</u>	<u>39,212</u> ^{b/}	<u>+ 25.8</u>
<u>Average Monthly KWH Per Farm Consumers</u>		<u>1944</u>	<u>1949</u>	<u>1951</u>	<u>1954</u>	<u>% Change 1949-54</u>
(A)	Ga. 96	33	60	81	147	+145.0
(B)	Ga. 35	46	112	152	228	+103.6
(C)	Ga. 69	52	91	111	156	+ 71.4
(D)	Ga. 67	56	84	122	214	+154.8
(E)	Ga. 70	52	106	138	200	+ 88.7
Average Sample Systems		<u>49</u>	<u>97</u>	<u>129</u>	<u>201</u>	<u>+107.2</u>

^{a/} Data for Georgia 35 weighted double.

^{b/} Reflects reclassification of around 1,700 consumers out of farm classification.

State of Georgia

So far, there has been shown a pattern of relationships in which Georgia has led its Region and the Nation in relative growth of farm "levels of living" and average farm kwh usage, despite slower growth in average farm income. On the other hand, it has lagged in numbers of farms, farm dwellings and farm consumers, while compensating this to some extent by greater growth in rural nonfarm population.

Economic Conditions Since 1950

More recent economic trends and conditions than revealed by census data are shown for the State in various publications and in the appraiser's field report. Total cash receipts from farm marketings increased over the period 1949-1954 about 25 percent in Georgia and the Region (Georgia, Florida and South Carolina) compared with an increase of 7 percent for the country as a whole. This better-than-national growth would appear to reverse the relationship of prior years. However, the value of farm sales in Georgia have declined since 1952, and relatively more than the decline for the Nation. In Georgia, total farm sales dropped 2 percent in 1953 and 12 percent in 1954 from the previous year. This 1954 decrease compares with an increase of 3 percent in Florida and declines of 18 percent in South Carolina and 5 percent in the Nation.

Economic conditions in 1954 are revealed in the Monthly Review of the Federal Reserve Bank of Atlanta, which reports for the Sixth District (Georgia, Florida, Alabama and parts of Tennessee, Mississippi and Louisiana). According to this source, the decline in District farm income was mainly the result of lower prices, acreage restrictions and extended drought. In Georgia, the decline in income from sales of crops was relatively greater than the drop in income from livestock. For the entire District, production of cotton and peanuts was down considerably; prices for these commodities were up somewhat. Beef cattle prices were down, but production was up. Manufacturing employment declined along with the drop in farm sales, but less than for the country as a whole. While textile, lumber and other establishments were laying-off workers, new plants, such as Rayoniers cellulose plant at Jessup, Georgia and Kraft Company's container plant at Rome, Georgia were adding persons to the payrolls. Employment in the trades and services continued to expand while construction activity remained high. At the end of 1954, general economic conditions in the District, as indicated by manufacturing employment and consumer spending, showed improvement.

Economic conditions and changes within the areas of the various sample systems in Georgia are described in the field appraiser's report. In area A there has been a large increase in poultry production since 1950. Net income from broiler production in the area was expected to be small in 1954 because of a decline in the price of broilers and an increase in the price of feed. Within the service area (Georgia 96) are found a number of industries providing off-farm employment to consumers of the cooperative. These industries include lumber and lumber products establishments, cotton textile mills, poultry processing plants, the Georgia Marble Works, a cutlery plant, a rubber factory and a Lockheed bomber plant.

In Area B, as represented by the service area of Georgia 35, the appraiser found cotton to be the principal farm product but also considerable diversification with livestock and livestock products, especially poultry, contributing significant amounts to farm income. Drought had not affected this area as seriously as other areas of the State. Off-farm employment was reported to be high with textile mills, poultry processing plants, a monument works and canning and furniture establishments in the area and new plants under construction.

In Area C, cotton is the dominant farm product. Off-farm employment is also important in this area and has increased since the 1950 Census of Agriculture as new industries have located in the area. Industrial establishments in the area of the sample system (Georgia 69) include sawmills, cotton and woolen mills, garment factories, a cannery and a metal fabricating plant. Clay mining is also of some importance.

Tobacco and forest products are the chief sources of farm income in the area of Georgia 67 and this would appear to be generally representative of all of Area D. Leaf tobacco is produced in the area and total acreage has been increasing. Most of the forests are owned by large lumber companies and selective cutting practices are followed closely. Livestock production is on the increase, especially beef cattle. Drought greatly affect both crops and pastures in this area during the 1954 season, as well as in 1952 and 1953. Off-farm employment is less than in the areas to the north.

In Area E, peanuts are the principal crop with cotton, tobacco and corn also grown. There is little off-farm employment. The area has suffered severely from the drought during the period 1952-1954.

NATURE OF PRESENT AND INDICATED FUTURE
AVERAGE KWH CONSUMPTION

Indicated Increases Based on Consumer Plans

At the time of the appraisal, weighted average monthly farm consumption for the sample systems was 192 kwh and the average for all REA farm consumers in Georgia was about 200 kwh. Averages for each of the sample systems compared with that of their sample consumers was shown in Table II.

Based on plans of respondents in the survey to add electrical equipment, all farm respondents indicated a 25 percent increase in usage within 3 years. By area the indicated increases range from around 30 percent in Areas A, B, and C to around 20 percent in Areas D and E. Based on these rates of increase, state average monthly farm usage over a 12 months period would be around 250 kwh in mid-1957, or 265 kwh by the end of 1957 if the growth were based on the 212 kwh average at the end of 1954.

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To compute rates of increase in usage planned by consumers, saturations of electrical appliances and equipment measured in terms of the percent of consumers presently having them and a corresponding percent anticipated in the future were compiled from questionnaires secured in the field survey. Using REA estimates of average energy requirements for each type of equipment, the equipment saturation data were converted to average energy requirements per consumer. A summary of this information in terms of indicated monthly consumption and the related percentage increases is shown in the following table.

TABLE VIII
INDICATED MONTHLY KWH CONSUMPTION ^{a/}

Areas and Systems	Present	Future ^{b/}	Percent Increase
Total ^{c/}	185	231	25
(A) Ga. 96	182	234	29
(B) Ga. 35	186	241	30
(C) Ga. 69	129	168	30
(D) Ga. 67	203	244	20
(E) Ga. 70	196	231	18

^{a/} Based on indications of 321 served farm respondents in survey and average energy requirements for appliances as determined by REA for the country at large.

^{b/} Based on what respondents expect to add within 3 years.

^{c/} Data for Georgia 35 are weighted double in totals.

The present saturation of each appliance in the various areas is shown in Appendix Table I. In Table IX below, these data are summarized for major appliances and equipment. Indicated increases in saturation and the corresponding proportions of present load, the increase in load and future total load are also shown.

TABLE IX

MAJOR ELECTRICAL APPLIANCES AND EQUIPMENT
PRESENT AND PLANNED SATURATION AND CORRESPONDING
PROPORTIONS OF TOTAL FARM KWH USAGE a/

Appliance or Equipment	Appliances Per 100 Consumers			KWH Usage As Percent of Total ^c		
	Present	Increase ^{b/}	Future	Present	Increase	Future
Water Heater With Bath	17	7	24	23	38	26
Range	35	10	45	19	21	19
Refrigerator	83	6	89	14	4	12
House Lighting	99	1	100	11	d/	9
Freezer (Home)	20	10	30	8	15	10
Television Receiver	28	21	49	5	14	6
Radio	94	3	97	4	d/	4
Pressure System	39	7	46	4	3	4
Iron	93	1	94	4	d/	3
Washing Machine	64	3	67	1	d/	*1
Miscellaneous	--	--	--	7	5	6

Total Indicated Usage Per 100 Consumers:

Percent	100	100	100
KWH Per Month	18,500	4,600	23,100

a/ Based on schedules for 321 served farm respondents of five Georgia systems with data by area weighted for State totals. Data shown here reflect instances of more than one of the same appliance per consumer.

b/ What respondents expect to add within 3 years.

c/ Based on average energy requirement for appliances as estimated by REA.

d/ Less than one-half of one percent.

All figures in the above table are percentages. The first three columns relate to number of appliances per 100 consumers. The last three columns show the percent of total kwh accounted for by the indicated saturation levels of the various appliances. Electric water heaters and ranges, both of which are subject to competition from gas, are the most important items in terms of the present and the planned increase in kwh use. Water heaters, for example, would account for over one-third of the expected increase in usage and in 3 years would account for 26 percent of total load compared

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with 23 percent at present. Freezers and television sets are other items of importance in terms of increased kwh usage. Use of electricity in the home outweighs by far the present or planned productive uses on the farm.

Consumption Trends

Over the past 3 years, average monthly kwh use for all REA farm consumers in Georgia has increased an average of 24 kwh each year (Table V). If this continued, the average by 1957 would be 285 kwh per month compared with the 265 kwh based on rates of increase indicated by respondents plans to purchase.

Historical consumption records for a sample of farm consumers who have been served continuously over several years reveal increases in average usage greater than the increases for all farm consumers. These larger increases in usage for the longer-served consumers indicate the potential growth in usage for all consumers, to the extent the older group is representative of all consumers except for length of service.

TABLE X

AVERAGE MONTHLY KWH CONSUMPTION, SAMPLE OF FIRST CONNECTED FARM CONSUMERS

AREA AND SYSTEM	NO. IN SAMPLE	1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953												PROJECTED 11 YEARS							
														AVERAGE INCREASE 1945 - 1953	KWH LEVEL	PERCENT INCREASE					
TOTAL A/	97	24	29	37	45	46	53	72	88	88	112	152	184	221	260	298	326	30	653	100	
(A) Ga.	96								(NOT AVAILABLE)										28	603	102
(B) Ga.	35	24	31	36	43	42	48	56	76	82	104	148	162	212	222	284	298		33	734	99
(C) Ga.	69	25	—	38	48	52	75	81	102	144	164	230	287	286	331	346	368		34	765	95
(D) Ga.	67	20	—	46	54	54	58	110	121	84	114	148	185	221	315	343	392		26	543	109
(E) Ga.	70	31	24	27	32	37	40	45	54	64	90	111	154	195	209	226	260				

A/ DATA FOR SYSTEMS WEIGHTED IN PROPORTION TO ALL SERVED FARM CONSUMERS AT TIME OF APPRAISAL WITH DATA FOR GEORGIA 35 WEIGHTED DOUBLE.

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Some comparison of the usage data for first connected consumers shown in Table X with usage of all farm consumers served by the sample systems can be made by reference to Table VII. It will be noted that usage of the first connected consumers is projected in Table X based on average increases in the absolute amounts of kwh, and the increase by this method is expressed as a percentage. ^{1/} The weighted average monthly kwh use of all farm consumers served by the sample systems was 53 kwh in 1945 and 178 kwh in 1953. This represents an annual increase of 15.6 kwh compared with the increase of 29.8 kwh for first connected consumers over the same period. Projecting the average 15.6 kwh increase for all consumers would yield a monthly average of 350 kwh within 11 years, an increase of 97 percent compared with the increase of 100 percent for the earlier consumers shown in Table X.

At the 100 percent increase within 11 years, based on analysis of first connected consumers, average monthly usage of all REA farm consumers in the State would increase from 212 kwh in 1954 to 424 kwh in 1965.

Gas Competition

Gas is used by 13 percent of the respondents. These sample consumers planned to continue their present arrangements with respect to use of gas. Only a negligible percentage planned to change from gas equipment to electric or, on the other hand, to add gas.

^{1/} Implied in this approach is the assumption that, while amounts of kwh increase are generally related to the levels of use, future growth would be more accurately indicated by projecting increases over the recent past by absolute amounts rather than at a constant percentage rate. More specifically stated, there are logical reservations to projecting at a constant percentage rate of growth the kwh increases which occurred during a developmental stage of usage, or which occurred over a period of unusual change in underlying economic conditions. Kwh growth is expressed as a percentage in Tables V and VII to facilitate comparison between areas. The indicated increase based on respondents plans (as shown in Table VII) is expressed as a percentage to provide a basis for adjusting sample results to actual average of all consumers.

The present uses of gas are shown in the following table.

TABLE XI
STATUS OF GAS USE BY SERVED FARM RESPONDENTS ^{a/}

Status of Gas Use	Total	Areas Systems	Number Per 100 Consumers				
			(A) Ga. 96	(B) 35	(C) 69	(D) 67	(E) 70
Using Gas	13		9	7	9	28	11
Using For:							
Cooking	12		2	6	6	27	11
Water Heating	3		2	1	4	4	5
Refrigeration	b/		0	0	2	0	0
House Heating	5		9	3	9	6	3
Chick Brooding	1		2	1	0	0	0

a/ All of 321 farm respondents indicating status with respect to use of gas.

b/ Less than one-half of one percent.

According to the 1950 Census of Housing, gas was used for cooking in 4 percent of the rural farm dwellings in Georgia, while in over 13 percent of the dwellings electricity was the fuel for cooking. Wood, as is true of most rural areas, was the predominant fuel. The 4 percent saturation of gas cooking compared with 3.5 percent in South Carolina, over 15 percent in Florida and over 22 percent for all farm dwellings in the Nation.

It has been estimated that of all farms in the Southeast using LP gas in 1949, 63 percent bought gas by the gallon at 15.9 cents per gallon and 37 percent bought gas by the pound at the equivalent price of 37.4 cents per gallon. The price of total purchases was 18.7 cents per gallon compared with the National average of 15.8 cents. The average price in the Southeast, based on distribution of farms (rather than amounts) as between the methods of purchase, was the equivalent of 23.9 cents per gallon. ^{1/} At this latter price a gas range using approximately 9 gallons (40 lbs.) of gas per month would have a fuel cost of about \$2.25 per month. ^{2/} For an electric range using 100 kwh per month, the electric rate would have to average about 2.25 cents per kwh for this block in order for electric energy costs to be equivalent to gas.

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- 1/ USBAE, Farm Consumption of Liquified Petroleum Gases, July 1951, Washington, D. C.
- 2/ See Bureau of Human Nutrition and Home Economics, ARS, USDA, Comparative Utilization of Energy by Household Electric and Liquified Petroleum Gas Ranges, Refrigerators, and Water Heaters, Technical Bulletin No. 1073, October 1953, Washington, D. C.

The "cooking block" rates of the sample systems as shown in Table I appear to be generally competitive with gas prices and the greater percentages of sample farms using electricity for cooking tends to support this conclusion. Of course, there can be substantial differences in gas prices and aggressiveness of dealers in the various areas and these generalizations regarding gas competition might not apply to all areas. In Area D (Georgia 67) electric rates are as low as in the other areas, but the percentage of the respondents in that area using gas for cooking is relatively high compared with the other areas and relatively high compared with the percentage owning electric ranges.

Power Use Promotion

Information was provided by the appraiser regarding power use promotion activities by individual systems within the State. Considerable variation in emphasis and techniques were found. One system does not employ a farm Electrification Advisor. A home economist had been employed and Section 5 loan funds had been made available at one time but both services were discontinued. Considerable use is made of a newsletter for promotional purposes.

Another system does employ a home economist as Electrification Advisor. Her activities include member education at club meetings, instructing power use leaders, conducting demonstrations such as on proper wiring, preparation of a newsletter, conducting a daily radio program, organizing sales campaigns and organizing contests to promote desirable uses of electricity. This system has offered its members a free wiring check-up with over 10 percent taking advantage of this offer and there is evidence that most of these members subsequently improved their wiring. Section 5 loans had been used in the past, but were discontinued. The manager and his board of directors were not enthusiastic about use of this credit and felt other credit was readily available. This feeling toward Section 5 activities was found at other systems.

It does appear that credit is generally available to farmers within the State. One report is that of the 345 insured banks, 335 lend money to farms for production, marketing needs and farm improvements. It has been reported that these banks loaned more than \$100,000,000 to farmers in 1953 with one-third of this as "production" loans including loans for purchases of equipment and facilities. This is, of course, in addition to credit available through associations and government agencies. The policies of banks in the various areas towards loans to purchase electrical equipment was not ascertained and this particular type of credit may not be so generally available. Drought conditions over the past 3 years have tended to make lending organizations more cautious and conservative.

The nature of power use activities at the other systems are generally indicated by the two examples given on the preceding page. One of the other sample systems employed no Electrification Advisor. Of the other two sample systems, one employed a man, the other a home economist, as Electrification Advisor. The latter system provided a rather detailed report on the work of their home economist, a report that indicated a very active program. This system also made use of Section 5 Loans. Some other power use activities found included free range installations, newspaper advertising, work with youth groups and individual dealer contacts. Of interest to dealers is the replacement market for electrical equipment. While this does not relate directly to estimates of future kwh use, data regarding age of major appliances were secured at the request of REA Electric Farming Specialists and this information is presented in Appendix Table II. This information does indicate rates at which appliances have been added over the past. Classification by age in greater detail than shown in the table indicates over 5 percent added new ranges in the year prior to the appraisal, almost 4 percent owned new freezers and almost 4 percent added new refrigerators. Many had washing machines less than 3 years old. The larger amount of older equipment was found in the case of refrigerators. Almost 50 percent of all consumers had refrigerators 4 or more years old.

INDICATED FUTURE NUMBER OF FARM CONSUMERS

The opinions of sample system managers regarding future increases in number of farm consumers were secured by the appraiser to assist in evaluating possible future changes in the various areas and in the State as a whole. The estimates which the managers believed to be reasonable are shown as percentage changes in Table XII. The weighted increase for the total sample was estimated to be approximately 30 percent by 1965.

Analysis of census data indicates a smaller increase of about 10 percent based on operating and census data for the sample group. This analysis indicates a small decline based on data for the State as a whole.

TABLE XII

INDICATED INCREASES IN NUMBER OF REA FARM CONSUMERS
1954 - 1965

Item	State	Sample Total ^{a/}	A 96	B 35	C 69	D 67	E 70
Consumers 1954	203,937	39,213	4,383	6,853	5,058	9,565	6,501
System Est. % Increase 1954-65 ^{b/}	---	+ 31	+ 23	+ 22	+ 27	+ 42	+ 41
Indicated Potential Change 1954-65 ^{c/}							
Consumers 1950	169,151	34,615	3,867	6,121	4,171	8,822	5,513
Percent of Farms with Elec. 1950 ^{d/}	75	---	69	82	77	76	77
Indicated Potential Cons. 1950 ^{e/}	225,535	44,719	5,604	7,465	5,417	11,608	7,160
Percent Change in Farms 1940-50 ^{f/}	- 8.3	---	-0.4	-0.9	-16.2	+11.5	-18.0
Indicated Potential Cons. 1955 ^{f/}	216,290	44,170	5,590	7,440	4,950	12,260	6,490
Indicated Potential Cons. 1965 ^{f/}	198,340	43,450	5,570	7,370	4,150	13,670	5,320
Indicated Pot. Percent Change in Cons. 1954-65	- 3	+ 11	+27	+8	-18	-43	-18

^{a/} Numbers for Georgia 35 weighted double in totals.

^{b/} Previous estimates prepared or agreed upon by borrower, extended where necessary to 1965.

^{c/} Average number first 6 months of 1950.

^{d/} Percentage based on census data for type of farming areas.

^{e/} Number served in 1950 expanded by dividing percent of farms with electricity in farming area; method assumes proportionate share of unserved available to REA borrowers.

^{f/} Rates of change in farm numbers 1940-1950 applied to indicated potential number existing in 1950 and rounded to nearest 10.

The above indications based on census data are not estimates for the individual sample systems or even for the larger areas and the State. They are based on unadjusted trends and arbitrary assumptions regarding the share of unserved farms which will be served by REA systems instead of by other power suppliers. These indications should provide, however, some basis for evaluating the future possibilities with regard to numbers within the State.

Generally, the relative increases in number of farm consumers have tended to decline since about 1950. Increases prior to that time were relatively large. There have been no actual declines in numbers among the sample systems, but disconnections and idle services have shown increases in recent years in some of the areas. In view of trends in number of farms prior to 1950 this is probably a normal development to some extent. Drought conditions in the past three years is undoubtedly another factor for increased disconnections. Changes in the number of idle services during 1954 are shown below:

System	Idle Services December 1954		Ratio Idle Services to All Bills (%)	
	As Percent of December 1953		December 1953	December 1954
Weighted Total	121		12.2	14.4
(A) Ga. 96	95		10.7	9.9
(B) " 35	119		12.6	14.7
(C) " 69	129		16.8	21.5
(D) " 67	131		11.0	14.2
(E) " 70	113		10.8	11.9

Continuous records of total idle services were available from the first two systems. For the other three, estimates of total idle services were available for a given period and the rate of change was estimated based on net disconnections during the year.

For the total group, the number of idle services increased 21 percent during the year and rose from 12 percent to 14 percent of the total number of billed consumers. Only in the area of Georgia 96 (Area A) was this pattern reversed.

APPENDIX TABLE I

PRESENT SATURATION OF ELECTRICAL APPLIANCES AND EQUIPMENT ^{a/}
FARM CONSUMERS

Appliance or Equipment ^{b/} (Number in Sample)	Percent of Consumers Presently Using					
	^{c/} Total Areas Systems (321)	(A) Ga. 96 (43)	(B) 35 (70)	(C) 69 (47)	(D) 67 (96)	(E) 70 (65)
Air Conditioning Unit	1	--	--	2	1	2
Air Compressor	1	5	1	--	--	2
Battery Charger	d/	--	1	--	--	--
Blanket	d/	--	--	2	1	--
Brooder (Hover)	9	--	4	9	19	8
Churn	1	--	1	--	2	--
Clock	20	19	26	9	14	26
Clothes Drier	d/	--	--	--	2	--
Coal Stoker	2	--	--	--	8	--
Deep Fat Fryer	1	--	3	--	--	2
Dishwasher	2	--	--	--	8	--
Drill Press	3	9	3	--	2	--
Evaporative Cooler	d/	--	1	--	--	--
Fan (Cent. Hot Air Cir.)	d/	2	--	--	--	--
Fan (Household)	38	30	36	30	47	43
Food Mixer	10	12	12	4	7	8
Freezer (Home)	20	7	16	19	35	15
Garden Watering	4	9	6	4	--	--
Hot Plate	5	16	3	9	3	3
Iron	91	98	91	81	94	92
Ironer	d/	--	--	2	--	--
Lawn Mower	1	--	3	--	--	--
Lighting:						
Bunk House	1	--	--	--	3	2
Dairy Barn	1	--	1	--	1	--
Garage	3	2	6	--	--	3
General Barn	3	5	4	4	3	--
House Lighting	99	100	99	98	99	97
Other Buildings	6	10	4	4	8	5
Poultry Brooder House	3	--	7	--	1	--
Poultry Laying House	5	21	4	6	3	2
Shop	1	2	--	2	1	2
Tobacco Barn	4	--	--	--	15	--
Yard	3	2	4	4	1	6
Livestock Watering	15	2	3	13	21	41
Manure Loader	d/	2	--	--	--	--
Milk Cooler	d/	--	1	--	1	--
Milking Machine	1	--	1	--	1	--
Oil Furnace	d/	--	1	--	--	--
Percolator	18	19	24	9	12	18
Power Saw	2	7	1	2	2	--

(Continued)
APPENDIX TABLE I

PRESENT SATURATION OF ELECTRICAL APPLIANCES AND EQUIPMENT ^{a/}

FARM CONSUMERS

Appliance or Equipment (Number in Sample)	Total ^{c/}	Percent of Consumers Presently Using					
		Areas	(A)	(B)	(C)	(D)	(E)
		Systems Ga.	96	35	69	67	70
	(321)	(43)	(70)	(47)	(96)	(65)	
Press. System (Less than 22')	4	--	3	--	8	5	
" (Greater than 22')	35	33	33	21	41	43	
Radio	91	91	91	87	93	91	
Range	35	35	42	21	32	37	
Refrigerator	82	93	83	60	88	79	
Refrigerator (Walk-in)	1	--	--	--	1	2	
Sewing Machine	10	14	14	9	3	11	
Soldering Iron	<u>d/</u>	2	--	--	--	--	
Space Heater (Portable)	<u>2</u>	--	4	--	--	2	
Television Receiver	28	37	53	4	10	11	
Toaster	9	7	14	6	--	15	
Tool Grinder	1	2	--	2	2	2	
Vacuum Cleaner	10	14	11	9	6	14	
Ventilator (Attic)	1	--	1	--	2	2	
" (Window)	4	2	4	--	3	9	
Waffle Iron	7	2	7	2	13	5	
Washing Machine	64	72	67	41	73	56	
Water Heater With Bath	17	19	14	9	19	23	
Water Heater (Dairy-Pressure Type)	1	--	1	--	1	--	
Water Warmer	<u>d/</u>	2	--	--	--	--	
Welder	<u>d/</u>	--	--	--	1	--	
Wood Saw	<u>1</u>	2	--	--	--	2	

^{a/} Based on a total of 321 usable field schedules for 321 served farm consumers. Data do not reflect instances of more than one of the same appliance per consumer.

^{b/} Not listed are a few items such as ice cream boxes, drink coolers and gasoline pumps found in country stores and gasoline stations served through farm residence meters. These represented a very small percent of total farm respondents.

^{c/} Data for Georgia 35 weighted double in totals.

^{d/} Less than one-half of one percent.

APPENDIX TABLE II

SELECTED HOME ELECTRICAL EQUIPMENT BY AGE OF EQUIPMENT

a/

Equipment	Number Per 100 Consumers ^{b/}					
	Total	Areas	(A)	(B)	(C)	(D)
	Systems	Ga. 96	35	69	67	70
<u>Refrigerator</u>	<u>83</u>		<u>93</u>	<u>84</u>	<u>62</u>	<u>89</u>
Under 4 years	35		51	24	34	44
4 years and older	47		42	60	28	42
4-6 years	31	35		37	17	28
7-10 years	10	5		13	7	11
Over 10 years	6	2		10	4	3
Age Not Reported	1	0		0	0	3
<u>Freezer (Home)</u>	<u>20</u>		<u>7</u>	<u>16</u>	<u>23</u>	<u>35</u>
Under 4 years	16		5	12	19	28
4 years and older	3		2	1	4	7
4-6 years	2	2		0	2	6
7-10 years	1	0		1	2	0
Over 10 years	d/	0		0	0	1
Age Not Reported	1	0		3	0	0
<u>Washing Machine</u>	<u>64</u>		<u>72</u>	<u>67</u>	<u>43</u>	<u>73</u>
Under 4 years	33		35	34	24	43
4 years and older	28		37	29	15	27
4-6 years	21	28		22	15	21
7-10 years	7	9		7	0	5
Over 10 years	d/	0		0	0	1
Age Not Reported	3	0		4	4	3
<u>Range</u>	<u>35</u>		<u>35</u>	<u>42</u>	<u>21</u>	<u>32</u>
Under 4 years	22		33	26	11	18
4 years and older	12		2	16	8	11
4-6 years	8	2		9	6	8
7-10 years	3	0		6	2	3
Over 10 years	1	0		1	0	0
Age Not Reported	1	0		0	2	3
<u>Pressure Water Systems</u>	<u>40</u>		<u>40</u>	<u>36</u>	<u>24</u>	<u>49</u>
Under 4 years	7		10	3	2	13
4 years and older	15		18	11	9	16
4-6 years	7	9		4	5	9
7-10 years	7	7		7	0	6
Over 10 years	1	2		0	4	1
Age Not Reported	18	12		22	13	20
<u>Water Heater</u>	<u>17</u>		<u>19</u>	<u>14</u>	<u>9</u>	<u>19</u>
Under 4 years	8		9	4	5	11
4 years and older	7		8	7	4	5
4-6 years	5	5		6	2	4
7-10 years	2	3		1	2	1
Over 10 years	0	0		0	0	0
Age Not Reported	2	2		3	0	3

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- a/ Based on usable schedules for 321 served farm consumers.
- b/ All data in this table are number of appliances per 100 respondents, including respondents not owning the specified equipment. (Totals for these items of equipment in Appendix Table I do not reflect more than one of the same appliance per consumer and therefore differ with these data in some instances.)
- c/ Data for Georgia 35 are weighted double in the totals.
- d/ Less than one-half of one percent.

